

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

#5

In re application of

Group Art Unit:

**Brian W. Baird, Michael J. Wolfe, Richard S. Harris,  
Kevin P. Fahey, Lian-Cheng Zou, and Thomas R. McNeil**

Application No.

Filed: concurrently herewith

For: **ULTRAVIOLET LASER ABLATIVE PATTERNING OF  
MICROSTRUCTURES IN SEMICONDUCTORS**

Date: December 14, 2001



INFORMATION DISCLOSURE STATEMENT

TO THE COMMISSIONER  
FOR PATENTS:

1. Pursuant to their duty of disclosure, applicants present for the Examiner's consideration the document listed on the accompanying Form PTO-1449.

☒ Copies of the documents are enclosed.

☐ Copies (a copy) of document(s) \_\_\_\_\_ are (is) not enclosed because they are already of record in U.S. Pat. Application No. \_\_\_\_\_, filed \_\_\_\_\_, which this application relies on for an earlier filing date under 35 U.S.C. § 120. (37 C.F.R. § 1.98(d).)

2. ☐ Applicant(s) draw(s) the Examiner's attention to the enclosed copy of copending U.S. Pat. Application No. \_\_\_\_\_, filed \_\_\_\_\_, for \_\_\_\_\_, which is cited in this application.

3. This information disclosure statement is being submitted:

a. ☒ Within three months of the filing date of a national application other than a continued prosecution application under 37 CFR 1.53(d); within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 in an international application; before the mailing of a first Office action on the merits; or before the mailing of a first Office action after the filing of a request for continued examination under 37 CFR 1.114. (No statement under 37 CFR 1.97(e) is required.)

b. ☐ After the period set forth in paragraph 1a, but before the mailing date of either a final action, a notice of allowance, or an action that otherwise closes prosecution in the application. (Check box i. or ii.)

- i. ☐ A \$180.00 information disclosure statement submission fee set forth in 37 CFR 1.17(p) is enclosed.
- ii. ☐ A statement specified by 37 CFR 1.97(e) is set forth below.
- c. ☐ After the mailing date of a final action or notice of allowance and on or before payment of an issue fee. A statement specified by 37 CFR 1.97(e) is set forth below. Enclosed is a \$180.00 information disclosure statement processing fee set forth in 37 CFR 1.17(p).
4. ☐ The attorney or agent signing below hereby states that:
- ☐ each item of information contained in the information disclosure statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement; or
- ☐ no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement.
5. ☐ Applicants set forth below concise explanations of the relevance of each document not in the English language and/or selected documents in the English language.

Respectfully submitted,

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(REV. 7-80)U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.  
50001/83:2 USA

APPLICATION NO.

INFORMATION DISCLOSURE CITATION  
(Use several sheets if necessary)APPLICANTS  
Brian W. Baird, et al.

FILING DATE

GROUP

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA	6 3 0 3 4 0 9	10/16/01	Karpman et al.	438	114	
	AB	5 8 6 4 4 3 0	01/26/99	Dickey et al.	359	559	
	AC	5 8 4 1 0 9 9	11/24/98	Owen et al.	219	121.69	
	AD	5 7 5 1 5 8 5	05/12/98	Cutler et al.	364	474.03	
	AE	5 5 9 3 6 0 6	01/14/97	Owen et al.	219	121.71	
	AF	5 5 4 3 3 6 5	08/06/96	Wills et al.	437	226	
	AG	4 6 1 8 3 8 0	10/21/86	Alcorn et al.	148	187	
	AH	4 5 8 9 1 9 0	05/20/86	Anthony	29	571	
	AI	5 8 7 0 4 2 1	02/09/99	Dahm	372	75	
	AJ	4 5 4 1 0 3 5	09/10/85	Carlson et al.	361	414	
	AK						
	AL						

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
/	AM	WO 01/52004 A1	19 July 2001	PCT	G05B	19/39		
/	AN	WO 00/73013 A1	07 December 2000	PCT	B23K	26/06		
	AO							
	AP							

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

/	AR	Anthony, T.R., "Diodes Formed by Laser Drilling and Diffusion," J. Appl. Phys., Vol. 53 (Dec. 1982), pp. 9154-9164.
/	AS	Lee, Rex A., et al., "Excimer vs ND:YAG Laser Creation of Silicon Vias for 3D Interconnects," IEEE/CHMT International Electronics Manufacturing Symposium (1992), pp. 358-360.
	AT	
	AU	

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.